4.3.3.2.1.2 *Site Infrastructure*

The potential impacts to the site infrastructure at six representative DOE sites for construction and operation of a ceramic immobilization facility are described below. Data for construction and annual operations are presented in Appendix C. Site infrastructure changes resulting from such construction are presented in Table 4.3.3.2.1.2–1 and changes from operations in Table 4.3.3.2.1.2–2 for the six representative sites.

Hanford Site

[Text deleted.] Construction and operation of this new facility would require construction of transportation links to the existing road and rail networks. DOE would site this facility close to existing roads and railroads to ensure that such construction and operations impacts would be negligible to the site infrastructure. Hanford would require additional natural gas supplies to operate the ceramic immobilization facility. Since natural gas availability is governed by usage and not by storage capacity onsite, the additional natural gas required for operations could be procured through normal contractual means.

Nevada Test Site

[Text deleted.] Construction and operation of this new facility would require construction of transportation links to the existing road and rail networks. Additional oil would be required during the period of construction and during operations. Since oil availability is governed by usage and not by storage capacity onsite, the additional oil required could be procured through normal contractual means or the construction companies could provide for this additional oil from local suppliers. Since NTS does not use natural gas, this facility would be designed to burn fuel oil if NTS were selected as the site. [Text deleted.]

Idaho National Engineering Laboratory

[Text deleted.] Construction and operation of this facility would require construction of transportation links to the existing road and rail networks. INEL plans to site this facility close to existing roads and railroads to ensure that such construction and operations impacts would be negligible to the site infrastructure. Since INEL does not use natural gas, this facility would be designed to burn fuel oil if INEL were selected as the ceramic immobilization facility site.

Pantex Plant

[Text deleted.] Construction and operation of this facility would require construction of transportation links to the existing road and rail networks. DOE would site this facility close to existing roads and railroads to ensure that such construction and operations impacts would be negligible to the site infrastructure. Additional oil would be required during the period of construction. Since oil availability is governed by usage and not by storage capacity onsite, the additional oil required for construction could be procured through normal contractual means or the construction companies could provide for this additional oil from local suppliers.

Oak Ridge Reservation

[Text deleted.] Construction and operation of this facility would require construction of transportation links to the existing road and rail networks. DOE would site this facility close to existing roads and railroads to ensure that such construction and operation impacts would be negligible to the site infrastructure. Additional oil would be required during the period of construction and during operations. Since oil availability is governed by usage and not by storage capacity onsite, the additional oil required could be procured through normal contractual means or the construction companies could provide for this additional oil from local suppliers for construction use.

Savannah River Site

[Text deleted.] Additional oil would be required during the period of construction and during operations. Since oil availability is governed by usage and not by storage capacity onsite, the additional oil required could be procured through normal contractual means or the construction companies could provide for this additional oil from local suppliers for construction use. Construction and operation of this facility would require construction of transportation links to the existing road and rail networks. DOE would site this facility close to existing roads and railroads to ensure that such construction and operations impacts would be negligible to the site infrastructure. Since SRS does not use natural gas, this facility would be designed to burn fuel oil if SRS were selected as the site.

Table 4.3.3.2.1.2–1. Additional Site Infrastructure Needed for the Construction of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative (Annual)

	Electrical		Fuel		
	Energy (MWh/yr)	**Peak Load (MWe)**	**Oil (l/yr)**	**Natural Gas (m^3/yr)**	**Coal (t/yr)**
Facility Requirement	10,200	2	3,000,000	0	0
Hanford					
Site availability	1,678,700	281	14,775,000	21,039,531	91,708
Projected usage without facility	345,500	58	9,334,800	21,039,531	0
Projected usage with facility	355,700	60	12,334,800	21,039,531	0
Amount required in excess to site availability	0	0	0	0	0
NTS					
Site availability	176,844	45	5,716,000	0	0
Projected usage without facility	124,940	25	5,716,000	0	0
Projected usage with facility	135,140	27	8,716,000	0	0
Amount required in excess to site availability	0	0	3,000,000[a]	0	0
INEL					
Site availability	394,200	124	16,000,000	0	11,340
Projected usage without facility	232,500	42	5,820,000	0	11,340
Projected usage with facility	242,700	44	8,820,000	0	11,340
Amount required in excess to site availability	0	0	0	0	0

Table 4.3.3.2.1.2–1. Additional Site Infrastructure Needed for the Construction of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative (Annual)—Continued

	Electrical		Fuel		
	Energy (MWh/yr)	Peak Load (MWe)	Oil (l/yr)	Natural Gas (m^3/yr)	Coal (t/yr)
Pantex					
Site availability	201,480	23	1,775,720	289,000,000	0
Projected usage without facility	46,266	10	795,166	7,200,000	0
Projected usage with facility	56,466	12.1	3,795,166	7,200,000	0
Amount required in excess to site availability	0	0	2,019,446[a]	0	0
ORR					
Site availability	13,880,000	2,100	416,000	250,760,000	16,300
Projected usage without facility	726,000	110	379,000	95,000,000	16,300
Projected usage with facility	736,200	112	3,379,000	95,000,000	16,300
Amount required in excess to site availability	0	0	2,963,000[a]	0	0
SRS					
Site availability	1,672,000	330	28,390,500	0	244,000
Projected usage without facility	794,000	116	28,390,500	0	221,352
Projected usage with facility	804,200	118	31,390,500	0	221,352
Amount required in excess to site availability	0	0	3,000,000[a]	0	0

[a] Fuel oil requirements in excess to site availability could be procured through normal contractual means.

Source: HF 1995a:1; INEL 1995a:1; LLNL 1996e; NTS 1993a:4; OR LMES 1995e; PX 1995a:1; PX DOE 1995g; SRS 1995a:2.

Table 4.3.3.2.1.2–2. Additional Site Infrastructure Needed for the Operation of the Ceramic Immobilization Facility (for Borehole)—Immobilized Disposition Alternative (Annual)

	Transportation		Electrical		Fuel		
	Roads (km)	Railroads (km)	Energy (MWh/yr)	Peak Load (MWe)	Oil (l/yr)	Natural Gas (m^3/yr)	Coal (t/yr)
Facility Requirement	< 5	< 5	35,000	5	210,000	3,800,000	0
Hanford							
Site availability	420	204	1,678,700	281	14,775,000	21,039,531	91,708
Projected usage without facility	420	204	345,500	58	9,334,800	21,039,531	0
Projected usage with facility	425	209	380,500	63	9,544,800	24,839,531	0
Amount required in excess to site availability	< 5	< 5	0	0	0	3,800,000[a]	0
NTS							
Site availability	1,100[b]	0	176,844	45	5,716,000	0	0
Projected usage without facility	645	0	124,940	25	5,716,000	0	0
Projected usage with facility	650	<5	159,940	30	5,926,000	3,800,000	0
Amount required in excess to site availability	0	< 5	0	0	210,000[c]	3,800,000[a]	0
INEL							
Site availability	445	48	394,200	124	16,000,000	0	11,340
Projected usage without facility	445	48	232,500	42	5,820,000	0	11,340
Projected usage with facility	450	53	267,500	47	6,030,000	3,800,000	11,340
Amount required in excess to site availability	< 5	< 5	0	0	0	3,800,000[a]	0
Pantex							
Site availability	76	27	201,480	23	1,775,720	289,000,000	0
Projected usage without facility	76	27	46,266	10	795,166	7,200,000	0
Projected usage with facility	81	32	81,266	15	1,005,166	11,000,000	0
Amount required in excess to site availability	< 5	< 5	0	0	0	0	0
ORR							
Site availability	71	27	13,880,000	2,100	416,000	250,760,000	16,300
Projected usage without facility	71	27	726,000	110	379,000	95,000,000	16,300
Projected usage with facility	76	32	761,000	115	589,000	98,800,000	16,300
Amount required in excess to site availability	< 5	< 5	0	0	173,000[c]	0	0

Table 4.3.3.2.1.2–2. Additional Site Infrastructure Needed for the Operation of the Ceramic Immobilization Facility (for Borehole)—Immobilized Disposition Alternative (Annual)—Continued

	Transportation		Electrical		Fuel		
	Roads (km)	Railroads (km)	Energy (MWh/yr)	Peak Load (MWe)	Oil (l/yr)	Natural Gas (m^3/yr)	Coal (t/yr)
SRS							
Site availability	230	103	1,672,000	330	28,390,500	0	244,000
Projected usage without facility	230	103	794,000	116	28,390,500	0	221,352
Projected usage with facility	235	108	829,000	121	28,600,500	3,800,000	221,352
Amount required in excess to site availability	< 5	< 5	0	0	210,000[c]	3,800,000[a]	0

[a] Facility would be adapted to use fuel oil instead of natural gas.
[b] Includes paved and unpaved roads.
[c] Fuel oil requirements in excess to site availability could be procured through normal contractual means.
Source: HF 1995a:1; INEL 1995a:1; LLNL 1996e; NTS 1993a:4; OR LMES 1995e; PX 1995a:1; PX DOE 1995g; SRS 1995a:2.